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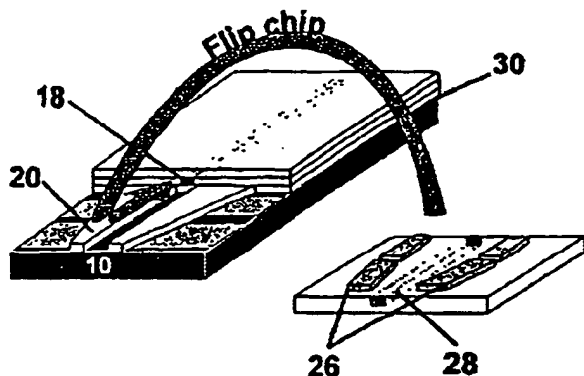
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(54) Title: HYBRID INTEGRATION OF ACTIVE AND PASSIVE OPTICAL COMPONENTS ON AN SI-BOARD

(57) Abstract: The present invention relates to an as-
sembly structure and a method for assembling active and
passive photonic and/or optoelectronic devices on a sil-
icon board. The invention relates in particular to an as-
sembly structure and a method for aligning the photonic
devices during the assembling procedure. According to
the present invention, the assembly structure comprises
one or more alignment features comprising tapered side
surface parts in directions at least substantially parallel to
an optical axis. By providing a tapering in a direction at
least substantially parallel to the first optical axis, any in-
accuracies primarily affects the non-critical positioning
in the direction along the optical axis, whereas the critical
positioning transverse to the optical axis merely de-
pends on the symmetry of alignment features. The errors
from the inherent inaccuracy of the position and shape of
alignment features are thereby minimised. Also, the de-

vices to be aligned are preferably arranged on top of the alignment features which forms part of the basic structure on the silicon board. All alignment features can thereby be defined in a single mask step together with the structures with which the alignment is to be carried out, resulting in an improved accuracy of the assembly structure. The resulting components will be used especially for broadband telecommunication components.

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